

Draft Report

Permit Monitoring Elements and Context Subgroup of the Stormwater Work Group

The Stormwater Workgroup developed the Permit Monitoring Elements and Context (PMEC) Subgroup to further refine how the Workgroup's recommendations will be integrated into the 2012-2017 NPDES municipal stormwater permits. Recommendations for these three monitoring elements (Status and Trends, Effectiveness Monitoring and Source Identification) must be refined by the end of October 2010 to comply with Ecology's permit reissuance timeline (page 3 of this report). The schedule for the SWG to approve recommendations submitted to Ecology requires that a draft report be completed by September 17, 2010.

The PMEC subgroup was tasked with evaluating the document produced by the Stormwater Workgroup titled *Major Topics of May 2010 Comments on April 30th Draft Strategy*, reviewing public comments and making new recommendations to the Stormwater Workgroup directly associated with NPDES Municipal Stormwater Permittee participation and permit requirements. This group was also tasked with developing timelines and sequencing detailing how associated tasks fit into Ecology's reissuance timeline for permit issuance. Timelines are included at the end of this report. This draft report is intended to document the workings of the PMEC subgroup and describe their recommendations.

Subgroup Schedule and Participation

The subgroup met four times over the course of the summer to develop specific recommendations and timelines. The subgroup focused on Status and Trends, Source Identification and Effectiveness. Table 1 shows participation at each subgroup meeting. All meeting materials and notes were shared among the entire subgroup.

Table 1 Matrix of subgroup participation

Name	Organization	July 27	Aug 10	Aug 23	Sept 14
Julie Lowe	Department of Ecology	X	X	X	X
Scott Collyard	Department of Ecology		X		
Karen Dinicola	SWG Project Manager, Department of Ecology	X			
Joyce Nichols	City of Bellevue		X		
Heather Kibbey	City of Everett	X	X	X	X
Bruce Wulkan	Puget Sound Partnership	X		X	X
Jonathan Frodge	City of Seattle		X		X
Tom Putnam	Puget Soundkeeper Alliance		X		X
Tim Determan	Department of Health	X	X		
Kit Paulsen	City of Bellevue	X	X		X
Dana DeLeon	City of Tacoma	X		X	X
Shayne Cothorn	Department of Natural Resources			X	X

Carol Smith	Conservation Commission			X	
Mindy Fohn	Kitsap County				X
Mike Milne	Brown and Caldwell				X

PMEC Subgroup Recommendations

General

Recommendations

1. For permittees who take the option to conduct the monitoring themselves, the permit should require the use of the Stormwater Workgroup monitoring framework and any associated SOPs to provide standardization and consistency.

Status and Trends

Recommendations

2. NPDES permittees (using the proposed S&T draw, 390 sites) should only be obligated to pay for a subset of these sample set. NPDES permittees should only pay for the % of sampling stations that fall within permitted jurisdiction boundaries.
 - a. The remaining sites must funded equally by other agencies to provide the level of accuracy necessary for making decisions/answering questions.
3. Allow flexibility in the permit to “ramp up” the program for the sampling round (defined on page 40-41 in draft strategy). Include the following objectives within the 5-year permit cycle:
 - a. Pay in option and budgeting (at least 1 year)
 - b. Site selection/access (at least 2 years)
 - c. Preparing for monitoring: order equipment, QAPPs/SOPs, contract agreements, coordination and training, contracts (1 year)
 - d. Monitoring (1 year)
 - e. Evaluate data (1.5 years)
4. The Stormwater Workgroup should further define the approach on flow monitoring.
5. The Stormwater Workgroup should investigate the possibility of existing status and trends sites and studies where similar data are being collected and find a method to link this “existing” data to with the new Puget Sound Status and Trends program. As written, Ecology’s status and trends program does not take into account the use of this existing data.
 - a. An evaluation is needed to look at comparative statistics and sampling methods/protocols to decide if the data are comparable.
6. A literature review is needed to identify existing data (working off Heather Trim’s work)
7. Ecology and EAP should evaluate how the near shore sediment sampling proposed in the draft strategy connects to PSAMPs work. The proposed near shore work should be a subset of that work.
8. The sediment sampling proposed is too frequency and should be limited to once per permit term.

9. Ecology and EAP should investigate how NOAA's Mussel Watch Program works into this proposal. Needed information includes:
 - a. Is this type of monitoring appropriate for outfalls?
 - b. Is this type of sampling more appropriate in the estuary areas in near shore areas?
 - c. Should we consider limiting Mussel Watch sites to only look at 10-12 sites across the Puget Sound?
 - d. Should we have "back up sites" where sites are of limited access.
 - e. What are the site selection characteristics and species and appropriateness for this program?
10. The Stormwater Workgroup should develop a "white paper" on each of the three monitoring programs to outreach to those interested. A shorter, communication document is needed to communicate the proposal to the public and to inform the permits.

Source ID Recommendations

1. For the 2012 permit, limit permit requirements to a literature review and building a repository for information to evaluate current source identification programs. This can provide more insight to help pinpoint common violators and help develop tools and identify common problems that can be viewed regionally (Example: Phase I program identifies during their business inspection program that restaurants are a common problem). Identify appropriate regional source control initiatives.
2. For the 2012 permit, do not create this as a stand-alone S8 program, instead use this piece as a guidance tool for S4, Compliance with Standards investigations, Illicit Discharge Detection and Elimination programs (IDDE) and Total Maximum Daily Loads (TMDLs) and Appendix 2 monitoring requirements. Ecology, TMDL folks and EAP work together internally on the integration of this program.

Effectiveness

11. Ecology should allow for time to review the Stormwater Monitoring Reports available from Phase I and Phase II jurisdictions after March 31, 2011 prior to developing permit language for effectiveness since this information will be used to gauge what questions we want to address regionally.
12. Studies should be implemented through the pay in option or multiple jurisdiction coordination.
13. The Stormwater Workgroup should develop a process with criteria for selecting the studies.
14. The pay in option should include a literature review as part of this overall process for selecting studies.
15. The Stormwater Workgroup should identify the list of SOPs for effectiveness (in particular, programmatic effectiveness). There is a need for consistent approaches to common questions and clear data objectives and analysis. SOP development is a highest priority and needs funding.

Ecology's Permit Issuance Schedule

Ecology's current schedules for reissuance of the Phase I and Phase II Municipal Stormwater Permits includes:

November/December 2010 - Ecology issues preliminary draft language for monitoring and opens an informal comment period

January – March 2011 - Ecology works to develop draft permit language

Spring/summer 2011 - Ecology issues draft permits

Fall 2011 - Ecology prepares response to comments and final permits

December 2011 - Ecology issues final permits

Timelines for Integrating Status and Trends, Effectiveness and Source Identification Framework into the Municipal Stormwater Permits

The following timelines were developed to identify specific tasks and deadlines in order to successfully integrate the three monitoring components into the municipal Stormwater permits. Each timeline is organized by monitoring component and is reflected as part of Ecology's current permit reissuance schedule.

Table 2. Status and Trends Timeline for Tasks, Roles and Deadlines.

Deadline	Role	Product/Task
October 2010	Ecology /EAP	Preliminary sample draws, statistical power analyses and evaluate WQI for Puget Lowlands nutrients
November 2010	Ecology	Finalize sampling design and finalize costs
February 2011	Ecology	Provide justification and overview of program for fact sheet. This includes identifying what questions this program will answer and how it relates to stormwater
March 2011	Ecology – EAP	Establish standardized reporting and guidance for data analysis
January 2012	SWG/Ecology	Identify SOPs (existing and needed)
January 2012	Ecology	Permit issuance date, pay in established, begin MOA process
January 2013-2015	Permittees/pay in	Ground truth sites, gain access permission.
April 2013	Permittees/pay in	Order equipment, training (if needed) and start up efforts
June-Sept 2014	Permittees/pay in	Initiate sampling (1 year)
December 2014- end of cycle	Permittees/pay in	Data input, QA/QC, analyses,
December 2015	Permittees	“hotwash” debrief on field sampling effort across Puget Sound– what went well, what needs work

December 2015	Permittee/pay in option	Status report per sampling design and reporting expectations
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Table 3. Source Identification Timeline for Tasks, Roles and Deadlines.

Deadline	Role	Product/Task
December 2010	Ecology	Ecology incorporates Source Identification as a tool for TMDL and S4 programs monitoring
April 2011	SWG	Identify information sharing needs (e.g. SOPs, success/failure stories)
January 2012	SWG	Identify ideas for repository for information sharing involving IDDE programs, SOPs, QAPPs, and other information sharing for permittees
October 2011	SWG	Identify the parameters and format for what is needed to collect for input into IDDE and other source identification process elements for adaptive management for the 2016 permits
October 2013	Permittee/pay in	Set up repository

Table 4. Effectiveness Timeline for Tasks, Roles and Deadlines.

Deadline	Role/Responsibility	Product/Task
March 2011	Current permit requirement: Phase II and Phase I	Phase I & II Stormwater Monitoring reports/questions due: include effectiveness questions and site selection from Phase II's and data from all Phase I programs (structural and programmatic effectiveness)
May 2011	SWG and Ecology	Identify common interests/regional priority questions from Ph I, Ph II and SWG recommendations
June 2011	SWG/Ecology	Establish regional effectiveness projects based on recommendations
January 2012	SWG	Refine criteria for effectiveness based on workshop feedback
January 2012	Ecology/permittees	Permit issuance date/Pay in begins – MOU/ILA contracting
March 2012	Ecology	Provide an overview to permittees for SWG/independent entities ranking and selection procedure for effectiveness studies
May 2012	SWG	Compile and sort effectiveness questions
May 2012	SWG	Initiate literature review once projects are selected and ranked

August 2012	SWG	Finalize priority study questions based on literature reviews & project needs
January 2013	Permittees/pay in	Effectiveness sampling designs completed
October 2013	Permittees/pay in	Permittee uses sampling designs and regionally evaluates possible sites for studies – includes field visits, agreements, access to property etc.
February 2013	Permittee/pay in	Finalize site selection and order equipment
January 2014	SWG SOP group	Complete SOPs for effectiveness (non-structural and structural). Structural BMP guidance follows TAPE guidance. Non-structural/programmatic BMP evaluation will need guidance and SOPs for data analysis and statistical evaluation.
June 2014	Permittee/pay in	QAPP development, finalization and approval
June 2014	SWG	Begin discussion around next priority questions
October 2014	Permittees/pay in	Initiate sampling
October 2016	Permittees/pay in	Anticipated sample completion date for some projects (this is a rolling of projects, dependent on # of projects etc.)
March 2017	Permittees/pay in	Status report due
January 2017	Ecology	Permit cycle expiration date